

IN THE CLAIMS

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Cancelled)
2. (Cancelled)
3. (Previously Presented) A pump as claimed in claim 19 wherein the membrane is formed from an elastomeric material.
4. (Previously Presented) A pump as claimed in claim 3 wherein the membrane is formed from elastomeric sheet material.
5. (Previously Presented) A pump as claimed in claim 19 wherein the membrane is damped between first and second sections, of the housing each housing section with one of the opposing surfaces having a cavity section such that when the housing sections are assembled to form the housing, the cavity with opposing surfaces is formed.
6. (Previously Presented) A pump as claimed in claim 19 wherein a pressure port opens into said cavity, said pressure port being connectable to a source or sources of positive and negative pressures.
7. (Previously Presented) A pump as claimed in claim 6 further including a device to cyclically apply the positive and negative pressures to the cavity to cause the membrane to move between the stable states.

8. (Cancelled)

9. (Previously Presented) A pump as claimed in claim 5 wherein the housing sections are joined together and to clamp the membrane about a peripheral margin thereof.

10. (Previously Presented) A pump as claimed in claim 5 wherein the first housing section includes a recess into which the membrane is located, the peripheral dimensions of the membrane being greater than those of the recess whereby compressive forces are set up in the membrane when it is installed in the recess to thereby create the preset.

11. (Previously Presented) A pump as claimed in claim 6 wherein the second housing section includes a protruding portion which engages in the recess when the first and second housing sections are combined together, to cause the membrane to be clamped in place.

12. (Previously Presented) A pump as claimed in claim 19 further including a third housing section coupled to the second housing section, said third housing section including means for facilitating connection of inlet and outlet conduits for pumpable material.

13. (Original) A pump as claimed in claim 12 wherein the second and third housing sections include inlet and outlet openings and means for locating therein a valve element.

14. (Original) A pump as claimed in claim 13 wherein the valve element is a disk of flexible material.

15. (Previously Presented) A pump as claimed in claim 6 wherein the cavity is elongate and the pressure port is offset in the length of the cavity.

16. (Previously Presented) A pump as claimed in claim 7 wherein the cavity is elongate and of curved cross-section.

17. (Original) A pump as claimed in claim 15 or 16 wherein the ends of the elongate cavity are complex curved.

18. (Cancelled)

19. (Currently Amended) A pump comprising:

a housing, a cavity with opposing surfaces,
an inlet port opening into the cavity,
an outlet port opening from the cavity,
a pressure port connected to the cavity,
a bi-stable flexible membrane located within the cavity,
wherein the flexible membrane being mounted within the housing and a pre-set is applied to the flexible membrane such that the membrane adopts a first stable state in contact with one of the opposing surfaces of the cavity and is invertible into a second stable state by the application of pressure to the cavity via the pressure port, wherein the bi-stable membrane is movable between the first and second stable states,

and wherein the first and second stable states correspond corresponding to completion of inlet and exhaust of a pumping cycle, respectively.

20. (Previously Presented) A pump as claimed in claim 7 wherein the clamping of the membrane creates further compressive forces in the membrane.

21. (Currently Amended) A pump including:

- i. a cavity with opposing surfaces;
- ii. inlet and outlet passages communicating with the cavity;
- iii. a pressure port connected to the cavity; and

iv. a bi-stable flexible membrane located within the cavity;

wherein the flexible membrane:

- a) ~~has a first stable state in contact with one of the opposing surfaces, the first stable state corresponding to completion of an inlet stage of a pumping cycle and a second stable state; and~~
- b) ~~has a second stable state in contact with the other opposing surface, the second stable state corresponding to completion of an exhaust stage of a pumping cycle; and~~
- e)b) can be caused to invert from one stable state to the other stable state by application of positive or negative pressure to the cavity via the pressure port;
and wherein;
- c) in the first stable state the membrane is in contact with one of the opposing surfaces, the first stable state corresponding to completion of an inlet stage of a pumping cycle; and
- d) in the second stable state the membrane is in contact with the other opposing surface, the second stable state corresponding to completion of an exhaust stage of the pumping cycle.